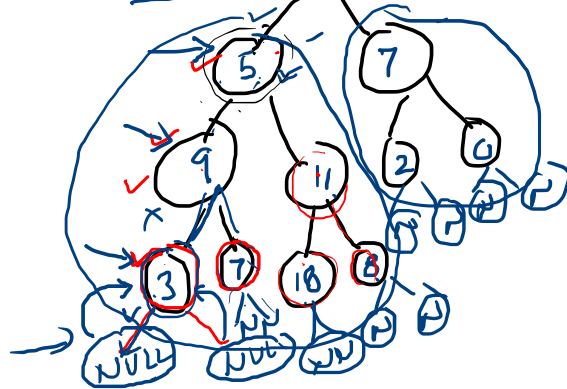


Root - 3



① Delete Binary Tree:-

```

Void delT ( Node* Root)
{
    if Root == NULL
        return!
    else
    {
        delT ( Root->Left);
        delT ( Root->Right);
        Free ( Root);
    }
    return;
}

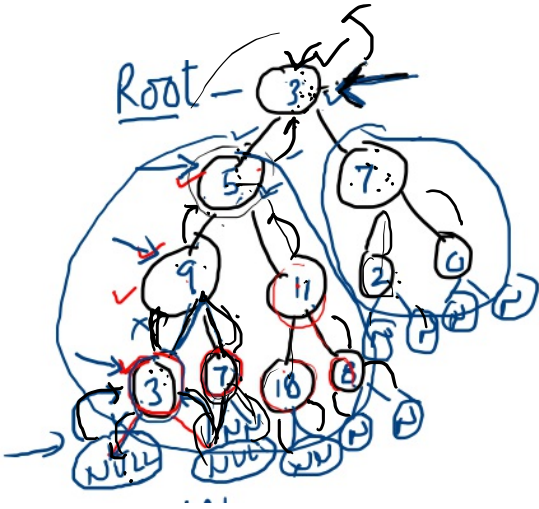
```

- ✓ Terminate
- ✓ Self calling
- ✓ Return

```

1      Main()
      {
        int Arr[] = {1, 2, 3, 4, 5, 6, 7, 8, 9, 10};
        Node* Root = Inser-Bst ();
        delT (Root);
      }
      (PRG)

```



Traversing: $\begin{cases} \text{Preorder} \rightarrow 3, 5, 7 \\ \text{Inorder} \rightarrow 5, 3, 7 \\ \text{Postorder} \rightarrow 5, 7, 3 \end{cases}$

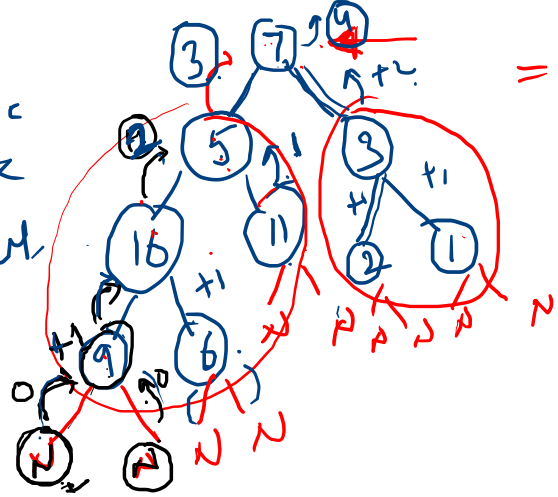
3 5 9 3 7 11 18 0 72 0

```
Void Preorder ( Node* Root )
{
    if ( Root == NULL )
        return;
}
```

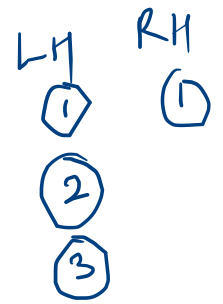
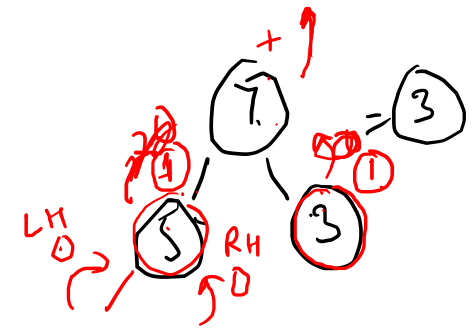
```
    cout << (Root->data);
    Preorder (Root->left);
    Preorder (Root->right);
    return;
```

3

Create
Traverse
Depth
Height



= depth (4)
L=3
R=2



Int
height (Node * Root)
if Root == NULL
return (0);

else
{ int LH = height (Root -> Left);
int RH = height (Root -> Right);
if (LH > RH) return (LH + 1);
else return (RH + 1);

3

① Total Number of Nodes in a BT:

int NodeCount(Node* Root)

if (Root == NULL) ✓
return 0; ✓

dnc

int $\text{LH} = \text{NodeCount}(\text{Root} \rightarrow \text{Left})!$
 int $\text{RH} = \text{NodeCount}(\text{Root} \rightarrow \text{Right})!$
 $\text{int} = (\text{LH} + \text{RH} + 1)!$

→ return (LH + RH + 1)!

3

Sum of all the elements% int

Not ~~iter~~ element :

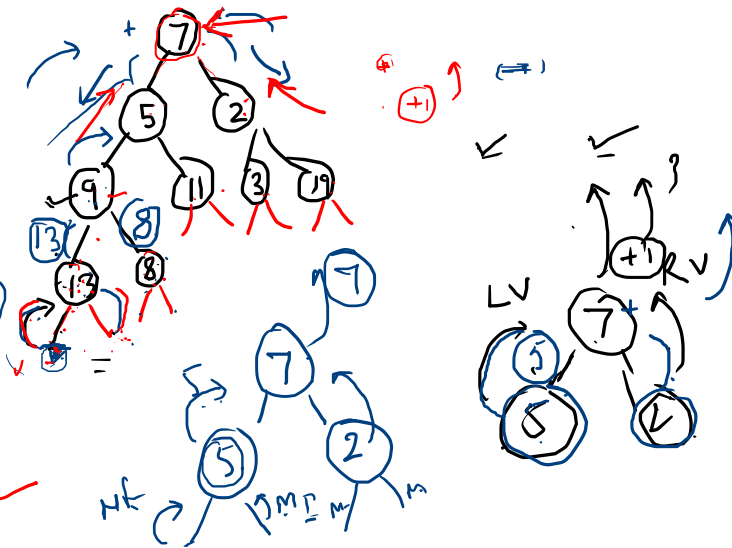
5

Max Element

```

int ME ( Node* Root )
{
    if (Root == NULL) return (INT_MIN);
    else
    {
        int LH = ME ( Root->Left );
        int RH = ME ( Root->Right );
        return ( max ( LH, RH, Root->data ) );
    }
}

```



① Count of all leaf nodes:

(int)

(int) countN(Node* Root)

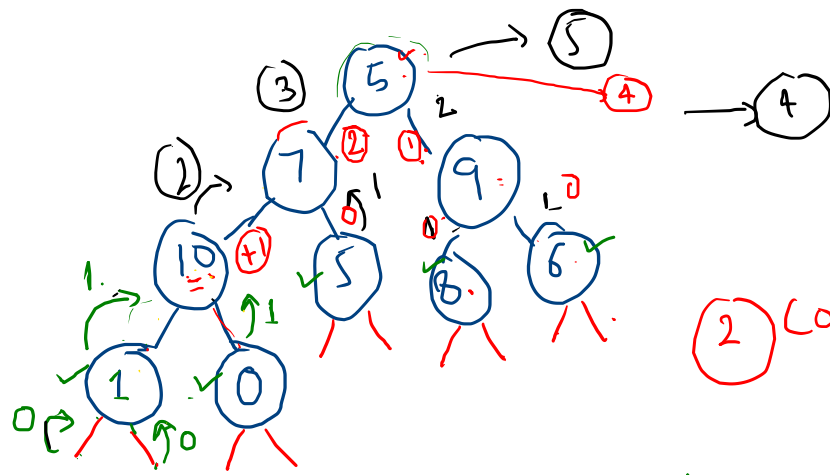
1
if (Root == NULL)
return 0;

else if (Root->Left == NULL & Root->Right == NULL)
return 1;

else {
int LH = countN(Root->Left);
int RH = countN(Root->Right);

return (LH + RH + 1);

3



② Count All non leaf nodes

④ Check if Two BT are identical:

1 = identical, 0 = non-identical

int checkID (Node^{R1} Root1, Node^{R2} Root2)

{
 if (Root1 == NULL)
 return (1) !

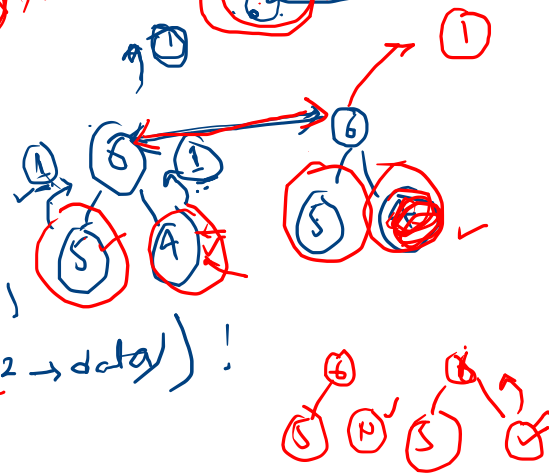
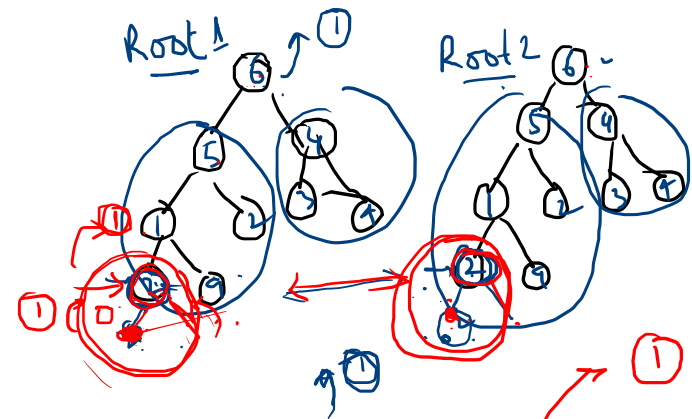
if (Root1 != NULL && Root2 != NULL)

int LS = checkID (Root1->left, Root2->left)
 int RS = checkID (Root1->right, Root2->right)

return (LS && RS && (Root1->data == Root2->data)) !

return (0) !

⑤ Mirror Image:-



main()
 {
 T1
 T2
 if (checkID (T1, T2))

① Count of Total Leaf Node:

